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84.(New) The communication system according to Claim 80, wherein the common bus comprises a data-in line, a data-out line, a clock line when the master is running under the Serial Peripheral Interface protocol.

85.(New) The card according to Claim 74, wherein one or more of the cards is a memory storage device.--

REMARKS

These remarks are in response to the final Office Action mailed on May 2, 2001. Consequently, a one-month extension is hereby requested and this Amendment is being filed along with a Request for Continued Examination. In the Office Action, all of the pending claims, claims 1-65, were rejected under 35 U.S.C. 103(a) as being unpatentable over the single reference of Iijima, U.S. Patent No. 5,349,949. It is respectfully submitted that these rejections are not well founded. Additionally, new claims 66-85 have been added.

Objection to the Drawings

The Office Action objected to the drawings under 37 CFR 1.83(a). It is believed that the drawings in their current form do satisfy the requirements. The various physical features contained in the claims are shown in the drawings of Figures 1-3. The various functions are found with respect to Figures 4-8. Further, additional support may be found in the "The MultiMediaCard System Specification", Version 1.4 by the MMCA Technical Committee, that is incorporated by reference on page 4, lines 10-13, of the present application and which was cited as a reference by the Examiner in the first Office Action.

Rejection of claims under 35 U.S.C. 103(a)

Claims 1-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le Iijima (5,349,949). These rejections under 35 U.S.C. 103(a) over only Iijima as a single reference are respectfully traversed. In addition to the errors noted below, it is admitted in the Office Action that these claims recite some feature which the Iijima patent "does not teach." Yet there is no further reference or other evidence of prior art presented to demonstrate that the overall claimed combinations including the elements missing from Iijima would have been obvious. The Office Action either summarily states that "it would have been obvious" to add the missing element to Iijima in order to meet the terms of the claims, or "Official

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Notice" is taken that the elements missing from Iijima were "well known" and would have been obvious to include in the claimed combinations. In either case, assumptions have improperly been made by the Examiner as to what one ordinarily skilled in the art would have found obvious at the time of the application to do since there is no supporting evidence provided in the Office Action. It is respectfully submitted that these rejections do not make the necessary prima facie case of obviousness, and that, on that basis alone, the rejection of claims 1-65 must be withdrawn.

In its Response to Arguments section, the Office Action lists several additional patents, but only in the most general sense. None of these appear to contain any of the elements found in the claims that are missing from the Iijima patent.

As noted in the previous Amendment, the Office Action is correct in that both the present application and the Iijima '949 patent are concerned with the problem of a memory card and a master that may need to communicate with each other through one of several different protocols. As also noted in the previous Amendment, the invention of the present application as described in the claims contains many elements lacking in Iijima.

In particular, in Iijima the *host* selects the protocol in a software implemented solution that assumes all of the available protocols can use a shared reset sequence on a single physical bus. In the present application the *card* selects the protocol in a manner transparent to the host based upon the protocol in which the host is running based upon a hardware implemented solution based upon pin configuration and using distinct busses for the different protocols.

Many of these differences, which are not found in nor believed obvious from Iijima, are described in more detail in the previous Amendment and are listed again below according to the various claim limitations.

Transparent to Host

The Office Action states (in regards to claim 13) that "Iijima teaches the adaptation of the card to the master being transparent to the master." This is respectfully submitted to be in error and contrary to Iijima's basic teachings. This is described, for example, at column 3, lines 48-51: "external device 7 outputs information for selecting its own protocol (step ST203) and then outputs various commands to IC card 1 (step ST204)." This is based on the "PTS data" of STP18 and STP24: "If the received data is the protocol

selection data (PTS) data, CPU determines (step ST19) whether the PTS data is data for designating protocol B.” (column 5, lines 5-7)

Consequently, the selection of the protocol is not transparent to the host as it takes an active part in the selection. Claims 13 and 28-38 all contain the limitation that the “adaptation of the card is transparent to the master” and are therefore additionally believed allowable for this reason.

Distinct Busses

The MMC and SPI protocol use distinct buses as described with respect to Figures 1 and 3 of the present application. Iijima relies on a single physical bus for both of its protocols, which is not an accurate assumption for or the example of MMC and SPI protocols, as it is based on all of the protocols being able to share a common explicit reset and a single sequence. Thus, the present application is contrary to the teachings of Iijima in this aspect.

This use of “a distinct bus for each of said plurality of communication protocols” is a feature of claims 39-50. It is also inherent in those claims which specify both the MMC and SPI protocols (claims 4-9, 16-21, 26-27, and 32-37) and is also reflected in the selection of the protocol being “based upon the structure of the interface”, as found in claims 51-65. Therefore, these claims are additionally believed allowable for these reasons.

Card Selecting Protocol

The description of Iijima makes it clear (column 3, lines 57-59) that “one of the plurality of protocols supported by the IC card is selected by the external device 7.” Similarly, column 4, line 46, to column 5, line 58 states: “Data communication processing of IC card 1 under the condition that IC card 1 supports two different communication protocols and *one of them can be designated by the external device...*[emphasis added]”.

In contrast, in the present invention it is the card which selects the protocol. This process is described, for example, on page 5, lines 12-18, of the present application:

The present invention is directed to a multi-mode card design so that the card according to the present invention is able to communicate with hosts running in different communication protocols. The selection of communication mode is detected and determined by the card at the initialization. Specifically, the host does not need to provide the card with additional mode information. By simply plugging the card to the host, the card can detect, determine, and operate in either one of these two modes of operation.

Independent claims 1, 11, and 23 all contain a limitation the entire mode selection is transparent to the host”(page 7, line19-20). For example, the last clause of claim 1 (as previously amended) reads:

wherein said card is capable of adapting to the master running one protocol selected from a plurality of communication protocols by selecting said one protocol.

Independent claims 11 and 23 contain similar language. Therefore, pending claims 1-27 are additionally believed allowable for these reasons.

Select Signal, Multiple Cards

The Office Action notes (in regards to claims 5, 8, 9, 17, 20-21, 31, 32, 37, 45-46, 49, 54-56, 61, 63, and 56) that “Iijima does not expressly teach the use of a select signal from the master.” In fact, Iijima does not teach a select signal because that patent describes the use of only a single card with the master. The teachings of Iijima neither describe nor suggest the use of or extension to multiple cards being simultaneously connected to the host, an extension whose implementation is believed to far from obvious. Consequently, the use of a select signal would have no function in the device of Iijima.

In contrast, the present invention provides for multiple cards, as shown in Figure 1 for the MMC case and for the SPI case in Figure 3. The select signal of the SPI case is shown in Figure 3 (CS from SPI bus master to each of the cards). Consequently, the claims featuring a select signal are additionally believed allowable for these reasons.

New Claims

New claims 66-73 have been added in the present Amendment. These are drawn to the aspect of the present invention described in the portion from page 5, lines 12-18, of the application quoted above. These claims contain the feature that (independent claim 70)

in response to the host initiating in the first protocol an initialization procedure for the connected card, the card selecting and operating in the first protocol

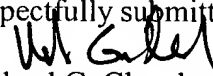
with similar language in independent claim 66.

New claims 74-85 have also been added in the present Amendment. These are drawn to the aspect of the present invention allowing the simultaneous connection of multiple cards to the host, as described above with respect to the use of a select signal.

Conclusion

For any of these reasons, reconsideration of the Office Action's rejection of claims 1-65, and consideration of new claims 66-85, is therefore respectfully requested, and an early indication of their allowability is earnestly solicited.

Respectfully submitted,



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